



High resolution bathymetry data documenting palaeo-glaciated terrain offshore Anglesey, UK: implications for the final deglaciation phase of the Irish Sea.

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High resolution swath bathymetry data was recently acquired 20 km offshore North Wales, UK. The data reveal part of a palaeo-glaciated terrain, unique in its kind on the European Shelf and provides the sole evidence for a grounded part of the Irish Sea Ice Stream.

Exceptionally well-preserved ribbed moraines, drumlins, flutes, eskers, De Geer moraines and iceberg scour marks are all associated in a submarine landscape created in a subglacial and ice-marginal environment during times of final deglaciation of the Irish Sea. In a reconstructed ice-till-bedrock setting, the spatial distribution and morphology of the observed subglacial bedforms can be explained using the time-space domain “fracturing” model for glacial bedform formation by Kleman & Hätterstrand (1999).

A thawing front migrated up-glacier and drumlinised the subglacial bed, partly eroding the edge of the surveyed ribbed moraine field. Analyses of the ice-marginal bedforms provide evidence for glaciomarine conditions in this part of the Irish Sea during the final phase of deglaciation. The ice stream retreated stepwise, leaving behind De

Geer moraines, actively calving into a proglacial water body, creating iceberg scour marks. As the glacial terrain has been left well-preserved, no significant burial could have taken place, either by glacially or terrestrially derived sediment. The strong tidal currents at present keep the submarine terrain swept clean.

Kleman, J. & Hätterstrand, C. 1999. Frozen-bed Fennoscandian and Laurentide ice sheets during the Last Glacial Maximum. *Nature* 402, 63-66.